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SERIAL NUMBER	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/355,208	12/09/94	CANADA	R 48545.00
24M1/0328			TRAMMELL EXAMINER
LUEDEKA NEELY & GRAHAM SUITE 1030 FIRST AMERICAN CENTER 507 GAY STREET KNOXVILLE TN 37902			ART UNIT 2414 PAPER NUMBER 3
			DATE MAILED: 03/28/96

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

This application has been examined  Responsive to communication filed on 3/16/95  This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), 0 days from the date of this letter.  
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1.  Notice of References Cited by Examiner, PTO-892.  
2.  Notice of Draftsman's Patent Drawing Review, PTO-948.  
3.  Notice of Art Cited by Applicant, PTO-1449.  
4.  Notice of Informal Patent Application, PTO-152.  
5.  Information on How to Effect Drawing Changes, PTO-1474.  
6. \_\_\_\_\_

Part II SUMMARY OF ACTION

1.  Claims 1-30 are pending in the application.  
Of the above, claims \_\_\_\_\_ are withdrawn from consideration.  
2.  Claims \_\_\_\_\_ have been cancelled.  
3.  Claims 20-24 and 28-30 are allowed.  
4.  Claims 1, 2, 12-15, 17, 19, 25 and 27 are rejected.  
5.  Claims 3-11, 16, 18, and 26 are objected to.  
6.  Claims \_\_\_\_\_ are subject to restriction or election requirement.  
7.  This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.  
8.  Formal drawings are required in response to this Office action.  
9.  The corrected or substitute drawings have been received on \_\_\_\_\_. Under 37 C.F.R. 1.84 these drawings are  acceptable;  not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).  
10.  The proposed additional or substitute sheet(s) of drawings, filed on \_\_\_\_\_, has (have) been  approved by the examiner;  disapproved by the examiner (see explanation).  
11.  The proposed drawing correction, filed \_\_\_\_\_, has been  approved;  disapproved (see explanation).  
12.  Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has  been received  not been received  been filed in parent application, serial no. \_\_\_\_\_; filed on \_\_\_\_\_.  
13.  Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.  
14.  Other

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**Part III DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103, the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 C.F.R. § 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of potential 35 U.S.C. § 102(f) or (g) prior art under 35 U.S.C. § 103.

2. Claims 1, 12-15 and 19 are rejected under 35 U.S.C. § 103 as being unpatentable over Nichol et al. (4885707)

Nichol et al discloses the claimed invention except for the housing dimensioned and configured for being hand held. It would have been obvious to one having ordinary skill in the art at the

time the invention was made to make the portable unit in figure 1 small enough to be hand held, since a mere change in size is generally recognized as being within the level of ordinary skill in the art. In re Rose, 105 USPQ 237 (CCPA 1955) and a mere change in form/shape is generally recognized as being within the level of ordinary skill in the art. In re Dailey, 149 USPQ 47 (CCPA 1976).

3. Claims 1 and 12 are rejected under 35 U.S.C. § 103 as being unpatentable over Canada et al. (4520674).

Canada et al discloses the claimed invention except for the housing dimensioned and configured for being hand held. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the device in figure 1 small enough to be hand held, since a mere change in size is generally recognized as being within the level of ordinary skill in the art. In re Rose, 105 USPQ 237 (CCPA 1955) and a mere change in form/shape is generally recognized as being within the level of ordinary skill in the art. In re Dailey, 149 USPQ 47 (CCPA 1976).

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4. Claims 2, 25 and 27 are rejected under 35 U.S.C. § 103 as being unpatentable over Canada et al. (4520674) in view of Witte (5233546).

Canada et al discloses the claimed invention except for means for digitally low-pass filtering and digitally decimating the digital signal to produce a conditioned digital signal having a reduced sample rate as compared to the digital signal and a predetermined upper cutoff frequency. Witte teaches that it is known to provide means for digitally low-pass filtering and digitally decimating a digital signal to produce a conditioned digital signal having a reduced sample rate as compared to the digital signal and a predetermined upper cutoff frequency, see figure 1. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include this means in the system of Canada as taught by Witte, since Witte states at column 3, lines 66+ that such filtering eliminates signal aliasing for any of a range of measurement bandwidths without an inordinately large memory.

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5. Claims 2, 17, 25 and 27 are rejected under 35 U.S.C. § 103 as being unpatentable over Nichol et al. (4885707) in view of Witte (5233546).

Nichol et al. discloses the claimed invention except for means for digitally low-pass filtering and digitally decimating the digital signal to produce a conditioned digital signal having a reduced sample rate as compared to the digital signal and a predetermined upper cutoff frequency. Witte teaches that it is known to provide means for digitally low-pass filtering and digitally decimating a digital signal to produce a conditioned digital signal having a reduced sample rate as compared to the digital signal and a predetermined upper cutoff frequency, see figure 1. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include this means in the system of Nichol et al as taught by Witte, since Witte states at column 3, lines 66+ that such filtering eliminates signal aliasing for any of a range of measurement bandwidths without an inordinately large memory.

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***Allowable Subject Matter***

6. Claims 3-11, 16, 18, and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
7. Claims 20-24, and 28-30 are allowable over the prior art of record.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jim Trammell whose telephone number is (703) 305-9768. The examiner can normally be reached on Tuesday-Friday from 6:30 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Todd E. Voeltz can be reached on (703) 305-9714. The fax phone number for this Group is (703)- 305-9724.

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Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3800.



JAMES P. TRAMMELL  
PRIMARY EXAMINER  
GROUP 2400

JPT  
March 15, 1996